

METHOD AND APPARATUS FOR PROVIDING DOMAIN CONVERSIONS FOR  
MULTIPLE CHANNELS AND APPLICATIONS THEREOF

ABSTRACT OF THE DISCLOSURE

5

A method and apparatus for domain conversions for multiple channels within a single analog front-end include processing that begins by generating a system clock. The processing continues by converting a frequency of 1<sup>st</sup> data from a 1<sup>st</sup> channel frequency to a 2<sup>nd</sup> channel frequency based on a 1<sup>st</sup> integer ratio of the system clock. The processing continues by converting the domain of the 1<sup>st</sup> data rate from a 1<sup>st</sup> domain to a 2<sup>nd</sup> domain. The processing continues by converting a frequency of the 2<sup>nd</sup> data of a 2<sup>nd</sup> channel from a 2<sup>nd</sup> channel frequency to the 2<sup>nd</sup> frequency based on a 2<sup>nd</sup> integer ratio of the system clock. For example, the rate of the 2<sup>nd</sup> data may be different than the rate of the 1<sup>st</sup> but both are converted to the 2<sup>nd</sup> frequency, which is universally used within the analog front-end. The processing continues by converting the domain of the 2<sup>nd</sup> data from the 1<sup>st</sup> domain to the 2<sup>nd</sup> domain.